

Legislative Victory for Renewable Energy and Energy Efficiency in South Carolina

As the 2007 legislative session drew to a close, the South Carolina General Assembly passed sweeping incentives for development, production and use of renewable energy, in addition to energy efficiency incentives, in what has turned out to be the biggest year for energy legislation since 1992.

Some of the changes will take place immediately, while others will be phased in over the next two years. Major achievements include:

Beginning July 1, 2007:

- A SC Renewable Energy Infrastructure Development Program that includes planning grants to aid in preparing federal proposals; matching grants for research and development and demonstration projects; and a low-interest loan program designed to assist entities building renewable energy projects;
- A SC Hydrogen Infrastructure Development Fund to provide grants to promote the development and deployment of hydrogen production, storage, distribution, and dispensing infrastructure and related products and services;
- A biofuels marketing program to promote public awareness;
- Free ethanol and biodiesel testing for SC producers;
- Expansion of the tax credit for solar purchases to include electricity generation;
- Increased tax credit for production of ethanol and biodiesel from alternative feedstocks, such as switchgrass, wood, waste cooking oil, animal fats, and algae;
- A requirement that school buses use 20 percent biodiesel (B20) where feasible; and
- A requirement that construction of large state-owned buildings be "Green Buildings" and meet certain nationally recognized building standards.

Beginning October 1, 2007:

- Sales tax exemption for equipment operated by, used to produce, distribute, manufacture, or research hydrogen or fuel cells. Also includes building materials and machinery used by a research district.



Increased tax credit for the production of biofuels from alternative feedstocks, like the switchgrass pictured here, is now available.

SC Summit Responds to National Action Plan for Energy Efficiency

Nearly 200 participants and a diverse panel of 21 speakers took part in the first South Carolina Summit on Energy Efficiency, held April 30 at the Columbia Metropolitan Convention Center. The event, sponsored by the SC Energy Office and a host of others, represented interests from various sectors including state and local government, utilities, businesses, and non-profit organizations. The objective of the meeting was to use the National Action Plan for Energy Efficiency, facilitated by the U.S. Department of Energy and U.S. Environmental Protection Agency, as a springboard for discussion and action in South Carolina.

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Governor's Initiative Foreshadows New Energy Future for SC

John Clark,
Director, SC Energy Office

In what could lead to South Carolina's biggest shift in energy supply and use patterns in the last half century, Governor Mark Sanford has established the Governor's Climate, Energy and Commerce Advisory Committee (CECAC). Its purpose is to "consider the potential benefits, costs, savings, and feasibility of furthering building and infrastructure efficiency, and of carbon dioxide mitigation options and related energy policy and economic opportunities, and develop specific recommended actions."

Increasingly, the public is becoming aware of the need to mitigate global warming through reduction of carbon emissions. Use of fossil fuels for energy is the chief culprit in increased carbon emissions, as well as in adverse impacts to air and water quality and to human health resulting from emissions of particulate matter, mercury, nitrogen oxide and sulfur dioxide. Solutions are in three categories: (1) reduce energy use, (2) use energy sources that do not emit large amounts of carbon, and (3) find ways to capture emissions and render them less harmful.

Any solutions to air quality and global warming problems will strongly affect energy use patterns. Because South Carolina produces no fossil fuels, the good news is that many of the solutions will be favorable for both our economy and our environment. Conservation and efficiency keep more dollars in the state, rather than going to oil suppliers in Venezuela, natural gas producers in Louisiana, and coal companies in Kentucky. Similarly, production of renewable energy such as electricity or gas from wood chips, biodiesel from soybeans and ethanol from switchgrass will pump hundreds of millions of dollars into our economy.

The Governor has appointed 30 members to CECAC, along with an additional 60 citizens to serve on five Technical Working Groups. CECAC (www.scclimatechange.us) and the Technical Working Groups will work through June, 2008, when a final report is due.

As Governor Sanford stated, national solutions are coming, and they are coming soon. South Carolina should get ahead of the curve and determine solutions that are the best fit for us, rather than simply wait to see what comes down from Washington.

Governor's Climate, Energy and Commerce Advisory Committee Member List

Senator John Courson (Columbia), Chairman
Dana Beach, SC Coastal Conservation League
Crandall Close Bowles, Springs Mills
Jim Byrd, SC Dept. of Insurance
Lonnie Carter, Santee Cooper
John Clark, SC Energy Office
Barry Falin, Carolina Operations, Vordian
Bob Fledderman, MeadWestvaco
John Frampton, SC Dept. of Natural Resources
Reggie Gallant, State Farm
Dr. Paul Gayes, Coastal Carolina University
Emerson Gower, Progress Energy Carolinas
Representative Ben Hagood (Sullivan's Island)
Ladd Hall, Nucor Steel
Representative Bill Herbkersman (Bluffton)
Joe James, Corporation for Economic Opportunity
Bob King, SC DHEC
Mayor E. Bruce Morgan, City of Union
Dr. Marcus Newberry, MUSC, Charleston
Mike Olbrich, BP Chemical
Bob Scott, SC Forestry Association
Lanneua Siegling, Hospitality Association of SC
David Smalls, Walterboro-Colleton Cham. of Com.
Steve Smith, Southern Alliance for Clean Energy
John Tiencken, Attorney, Mount Pleasant
Bill Timmerman, SCANA
Senator Danny Verdin (Laurens)
Hugh Weathers, SC Dept. of Agriculture
Johnny Williamson, South Carolina Soya, LLC
Brad Wyche, Upstate Forever

To learn more about the
Governor's Climate, Energy and
Commerce Advisory Committee, please
visit www.scclimatechange.us



Legislation, continued from Page 1

Beginning January 1, 2008

- Tax credit of up to \$2,000 for plug-in hybrid vehicles purchases;
- Tax credits of up to \$100,000 for research and development of renewable fuel feedstocks best suited for South Carolina, for cellulosic ethanol and algae-based biodiesel;
- Tax credits for contributions made by a taxpayer to the South Carolina Hydrogen Infrastructure Development Fund;
- Tax credits for the purchase and installation of equipment to produce electricity or gas from biomass resources such as wood and wood waste, agricultural and animal waste, sewage, landfill waste, and other organic materials; and
- A requirement that all state-owned diesel pumps provide a minimum of five percent biodiesel.

Beginning July 1, 2008:

- Tax rebates up to \$300 for the purchase or lease of vehicles that are flex-fuel (ethanol), hybrid, electric, or fuel efficient with an EPA city fuel economy of 30 mpg or greater;
- Incentive payments for biomass energy users ranging from one cent per kilowatt-hour or 9 cents per therm.

Beginning July 1, 2009:

- Five cents per gallon incentive payments for retailers selling B20 biodiesel and E85 ethanol.

For more information about the new legislation, please visit the SC Energy Office website at www.energy.sc.gov, and click on Public Information.



SC Summit on Energy Efficiency participants.
Courtesy of Kristine Hartvigsen, SC Chamber of Commerce

Summit, continued from Page 1

The National Action Plan exists to facilitate a sustainable, aggressive national commitment to energy efficiency by gas and electric utilities, utility regulators, and partner organizations. At the SC Summit, efforts were focused solely on South Carolina. All speakers, including Kateri Callahan, Executive Director of the Alliance to Save Energy, identified key challenges to increasing energy efficiency and consumer awareness in the state. "South Carolina has an opportunity to exert strong leadership that realizes dramatic results, minimizes the need for imported energy, creates new jobs, and helps keep energy prices low," she said.

Panel and discussion topics included "Why Energy Efficiency Makes Economic and Environmental Sense for South Carolina," "Challenges to Increased Energy Efficiency and Consumer Awareness in South Carolina," and "Opportunities to Address Challenges and Take Energy Efficiency to the Next Level in South Carolina." John Clark, Director of the SC Energy Office, agreed to organize future discussions with the various stakeholders to continue the discussion.

In the Palmetto State and across the nation, the Action Plan recommends that we first recognize energy efficiency as a high-priority energy resource. Then, we must make a commitment to implement cost-effective energy efficiency measures, communicate the benefits of and opportunities for energy efficiency, promote sufficient program funding to deliver energy efficiency, and modify policies and ratemaking practices of utilities to maximize incentives and investments regarding energy efficiency.

Sponsors of the event included Advanced Energy, Alliance to Save Energy, Catawba College Center for the Environment, Duke Energy, Environmental Defense, Furman University, Progress Energy, Santee Cooper, South Carolina Department of Health and Environmental Control, South Carolina Department of Natural Resources, South Carolina Electric and Gas Company, South Carolina Energy Office, South Carolina Institute for Energy Studies, South Carolina Chapter of the US Green Buildings Council, South Carolina Coastal Conservation League, South Carolina Chamber of Commerce, South Carolina Manufacturers Alliance, Southeast Energy Efficiency Alliance, Sustainability Institute, University of South Carolina School of Environment.

To learn more or to download presentations from the summit, please visit www.energy.sc.gov and click on News.

Envirothon: A Natural Challenge!

How sharp are you when it comes to soils, water resources, forestry, wildlife, and alternative energy? Would you be confident enough to be quizzed on those topics? Many of the state's most environmentally-minded students did exactly that when they participated in the South Carolina Envirothon, an integrated education experience that promotes environmental education so that young women and men will be environmentally literate and possess the skills and knowledge to make informed decisions regarding the world around them.

Twenty-five teams gathered at Clemson University's Sandhills Research and Education Center outside of Columbia on May 4 to participate in the Envirothon.

As part of the day-long competition, students rotated through five testing stations and an oral presentation stage, all vying for scholarships and the chance to represent South Carolina in this summer's International Canon Envirothon in Geneva, New York.

At the concluding awards ceremony, the winners were announced. The first place award was earned by Spartanburg High School's Team A, while Spartanburg High School's Team B secured second place, and Strom Thurmond High School's Future Farmers of America rounded out the top three.

Representatives from the SC Energy Office served on the Envirothon steering committee and sponsored this year's current environmental topic station focused on alternative energy. The main sponsors of this year's event were the Richland Soil and Water Conservation District (SWCD) and the Harry Hampton Memorial Wildlife Fund, with support from SC Department of Natural Resources (SCDNR), USDA-Natural Resources Conservation Service (NRCS), the SC Chapter of the Soil and Water Conservation Society (SWCS), and the SC Conservation Districts.

For more information, please visit www.dnr.sc.gov/education/Envirothon.



Biodiesel Operation Moving to Aiken County

Farmers & Truckers Biodiesel has found a new home in Aiken County, where it will relocate from Georgia to take advantage of South Carolina's latest state tax credits for alternative fuels. The South Carolina Department of Commerce and the Aiken-Edgefield Economic Development Partnership announced in March that the biodiesel operation is spending \$1.4 million to convert a Warrenton warehouse into a new plant. The investment is expected to bring 15 new jobs to the area within six months and an additional 45 jobs within three years.

"We are excited about building and operating a biodiesel plant in Warrenton," said Chuck Pardue, CEO, Farmers & Truckers Biodiesel. "Our plant will initially produce five million gallons of biodiesel, with future planned expansion to over 20 million gallons of biodiesel at the Warrenton site. South Carolina and Aiken County have been strongly supportive of our project and we look forward to a long and mutually profitable relationship."

The biodiesel produced by Farmers & Truckers Biodiesel is a clean-burning, renewable alternative fuel that lubricates and extends the life of diesel engines. The fuel is produced from various feedstocks grown and supplied by local farms, and the company plans to utilize products such as soy oil, chicken fat, and cotton seed oil for its operation.

Economic and Environmental Benefits are Blowin' in the Wind

An impressive group of scientists, lawmakers and utility executives convened in Charleston for the Feb. 26-27 Southeast Regional Offshore Wind Power Symposium, where researchers from across the nation presented information about the viability of offshore wind power in the Southeast. Presentations showcased the economic and environmental benefits of offshore wind technology currently employed in Europe and possibilities for public and government officials to develop similar wind technology along the South Carolina, North Carolina and Georgia coasts.

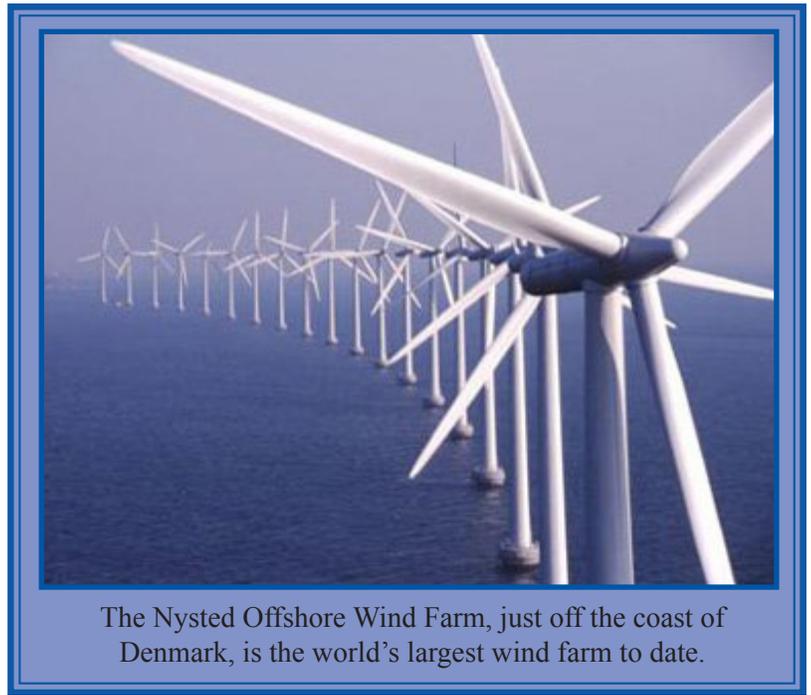
Wind energy is a clean, indigenous energy resource that provides an alternative to fossil fuels. It improves air quality, reduces greenhouse gases and diversifies the energy resources of the United States. According to Dr. Nicholas C. Rigas, Director of the South Carolina Institute for Energy Studies, lead organizer of the conference, ocean breezes could be harnessed and put to use as an alternative power source if generators were placed on 100-300 foot towers, 8-10 nautical miles off the Southeastern coast.

"People . . . equate the ocean winds with megawatts, but for many people that's not a compelling argument to support the massive investment it will take to build a wind farm," said Rigas. "What they should be talking about as well is the huge economic development potential this alternative energy source holds for the port communities of states that embrace this technology."

As a result of the Symposium, students and engineers from the South Carolina Institute for Energy Studies at Clemson University, Coastal Carolina University, Santee Cooper, Savannah River National Laboratory, South Carolina Research Authority and SC Launch! have pooled resources to institute wind-power projects on Waites Island, a barrier island off the coast of Horry County, and in North Charleston, at the former Navy base.



Installation of the first anemometer station on Waites Island.



The Nysted Offshore Wind Farm, just off the coast of Denmark, is the world's largest wind farm to date.

This project will feature a 160-foot mobile tower equipped with electronic gauges to collect critical data to assess the energy potential of wind and solar applications. Anemometers will be installed at three different heights to measure wind velocity. Special sensors will record solar radiation, barometric pressure and ambient temperature. Data will be collected for one year to assess the potential for installing a commercial scale wind turbine to support future energy related applications such as off-shore wind farms.

The first of three anemometer stations was successfully assembled June 19-20 on Waites Island. Students from Clemson University and Coastal Carolina University will be monitoring the data collected from this station to assess the feasibility of harnessing wind power to generate commercial electricity.

To learn more, please visit:

<http://www.clemson.edu/scies/SCCWPPWaitesIsland.htm>

SC Energy Office Enlightens Home Show Attendees

Simple changes can save energy and money. That was the message we shared with hundreds of home show attendees at the Home and Outdoor Living Show in Charleston, February 23-26, and the Carolina Classic Home and Garden Show in Columbia, March 9-11. SCEO employees and volunteers provided information by answering questions and distributing handouts to homeowners and building professionals alike.

The interactive SCEO exhibits featured product examples, educational signs, detailed fact sheets, energy-related literature, and drawings for free energy efficient products, including compact florescent light bulbs. Areas of particular interest to home show-goers included green building practices, solar power, proper insulation, and retrofitting older homes to integrate new energy-efficient methods and products.

SCEO also promoted EarthCraft House, a green building program that serves as a blueprint for healthy, comfortable homes that reduce utility bills and protect the environment. Program information and guidelines were emphasized, along with details about EarthCraft Builder Workshops sponsored by the SCEO.



SC Energy Office and Southface Institute exhibit at the Charleston Home and Outdoor Living Show.



SCEO Provides Energy Use Data Services

The SCEO publishes a report entitled Energy Use in South Carolina's Public Facilities, which is a compilation of energy usage and cost statistics from school districts, state agencies and public colleges in South Carolina. In order to make reporting easier and to assist public entities in tracking their energy use, the SCEO supports a web-based energy accounting system known as Utility Direct, by SchoolDude.com. The system enables facility managers to monitor utility costs and identify potential savings. It can also flag bills that vary in usage and cost above a specified "normal" amount to identify leaks, malfunctioning equipment, equipment operating after hours, or other problems.

Sixty public entities—ranging from administrative agencies to educational institutions such as Coastal Carolina University and Anderson School District 5—are now using SchoolDude.com. Others use a variety of tracking systems and simply send their data to the SCEO for entry into the master Utility Direct account. Now, agencies that sign up for the SchoolDude system can start out with three years of their data already in the system. This will save them time and money, and enable them to begin evaluating long-term trends immediately.

Utility Direct is also planning user groups and seminars around the state to help agencies decide whether Utility Direct is the right system for their needs and to help existing users get the most from their systems. Watch for news about upcoming seminars, the first of which will be July 12 in Kershaw.

Finally, mark your calendars for SchoolDude University, held each fall at Kingston Plantation. Last year's "SchoolDude U" attracted 800 participants from around the country, and included a panel discussion about the SCEO program.

Questions? Contact Julia Parris at (803) 737-9825 or jparris@energy.sc.gov.

ASCEM Joins with Tri-Association of Facility Managers

The Association of South Carolina Energy Managers (ASCEM) joined with sister organizations ASPACO (Association of State Planning and Construction Officials) and SCAPPA (South Carolina Association of Physical Plant Administrators) to host the South Carolina Tri-Association of Facility Managers Spring Conference March 6-8 at the Sand Dunes Resort in Myrtle Beach.

Performance contracting, indoor air quality, and South Carolina Energy Office (SCEO) services and activities were among the topics offered in educational sessions for the 230 attendees from school districts, state and local government, and colleges and universities throughout the state. The SCEO also maintained an exhibit booth, along with a number of other facilities services providers.

The next SC Tri-Association of Facility Managers Conference is scheduled for November 6, 2007 at Clemson University's Madren Center. If you have a topic or speaker you would like to suggest, please contact one of the board members (see ASCEM pages at www.energy.sc.gov) so your input can be forwarded to the Planning Committee. If you are a vendor and would like to sponsor part of the event, please contact Julia Parris, Secretary of ASCEM, at jparris@energy.sc.gov or (803) 737-9825.



South Carolina Mayors Unite Against Global Warming

South Carolina Mayors for Climate & Energy Leadership, a new bipartisan organization of state leaders who hope to initiate significant action to address global climate change, held its first meeting on February 28 in Columbia as part of a statewide webcast.

U.S. Senator Lindsey Graham spoke by phone from Washington D.C. to more than a dozen South Carolina mayors and called climate change a real problem that creates a "moral obligation" to act. He went on to say that South Carolina can be a national leader in transitioning from dependence on fossil fuels, focusing instead on fuel-cell research, cellulose-based ethanol production, and recycling of nuclear waste.

According to Charleston Mayor Joseph Riley, "It's our responsibility to act and to act with dispatch." Riley has already implemented energy-saving ideas in Charleston, such as replacing street lights and traffic lights with bulbs that use 80 percent less energy while producing the same end-product.



**Green is Good for Business:
Columbia Climate Protection
Action Conference**

September 24, 2007
8 a.m. to 3 p.m.
Columbia Convention Center
www.coccpac.com

In other efforts, Columbia's "Mayor Bob" Coble established a Climate Protection Action Committee which has developed comprehensive recommendations for city action, including a green business initiative. The committee is planning a summit on the topic on September 24 in Columbia.

"We intend to encourage one another," said Spartanburg Mayor Bill Barnet. "Maybe it's federal legislation we can support and encourage. Maybe it's state legislation or local. Maybe it's the things we do . . . we can't change the world from Spartanburg, but we can do something to start the ball rolling."

For information on Columbia's Climate Conference, co-sponsored by the SC Energy Office and a host of other partners, please visit www.coccpac.com.

SCEO Sponsors Energy Performance Contracting Training

In early April, approximately 50 state program and facility managers gathered for a two-day training workshop on Energy Performance Contracting in Public Buildings. Energy performance contracts are agreements between a building owner and an Energy Service Company (ESC) or equipment manufacturer to provide energy saving improvements which are financed through the savings they produce. This provides a way for cash-strapped building owners to manage the problem of large up-front costs for major retrofits.

The workshop was part of a larger national project to develop and test a training program for state personnel who are responsible for administering energy performance contracts for public facilities. The project is being carried out by the National Association of Energy Service Companies (NAESCO) under the auspices of the SC Energy Office, with funding provided by the US Department of Energy.

The well-received workshop provided participants with the programmatic and technical guidance they need to oversee an energy performance contracting program from start to finish. Training instructors included three nationally-recognized experts who have over 50 years experience with energy performance contracting in the public sector. Other speakers included Mitch Perkins of the SC Energy Office and state energy office directors and representatives from energy service companies throughout the country.

The SC Energy Office provides assistance to public entities interested in energy performance contracts with private sector vendors. For more information, please review the Guide to Performance Contracting or the Performance Contracting Manual on our website. Just visit <http://www.energy.sc.gov> and click on Public Institutions, Financing Energy Projects. To learn more about Energy Performance Contracting, please visit the NAESCO website at www.naesco.org. Workshop presentations can be downloaded at www.naesco.org/presentations by entering "sceo" as the user name and "april2007" as the password. Please note that both the username and password are case sensitive.

Need Help with Energy Efficiency Planning?

It's hard to pick up a newspaper or magazine without finding an article about energy use—energy efficiency, energy conservation and news about alternative forms of energy have all been prominently featured.

State agencies and public school districts are required to develop energy conservation plans and goals and submit them to the SCEO. In order to assist public entities and others with the planning process, the SCEO developed a guide for facility directors, including advice for goal setting and sample energy conservation plans.

The Best Practices Guide is available on the SCEO website. Please visit www.energy.sc.gov and click on Public Institutions, and then the Best Practices Guide.



SC Energy Office Celebrates Earth Day!

Earth Day was a three-week celebration for the Energy Office this year, as we traveled to Greenville, Camden, Rock Hill, Charleston, and Columbia to participate in various Earth Day events. The SC Energy Office provided games, prizes, and information focusing on energy efficiency and conservation.

A Lesson in Living Green: Clemson University's Eco-Plex

At first glance, it seems like a normal duplex. However, a closer look proves why the Eco-Plex, a research project sponsored by Clemson University Residential Facilities, stands out from other student apartments on campus. To reflect the school's commitment to the environment and sustainability, the Eco-Plex was renovated to not only efficiently use energy and water, but also reduce the building's overall impact on the environment.

In this living and learning environment that uses 1/3 less energy than the other campus duplexes, residents carry on their daily activities with equipment, furnishings, and materials that are environmentally-friendly and encourage eco-conscious behavior. For example, the Eco-Plex is equipped with low flow faucets and showerheads, reduced water volume flush cycle toilets, ENERGY STAR appliances, and bins for recycling and composting. Solar energy is also utilized through passive solar with skylights, and through active solar with a solar attic fan, hot water heater, and lights. Green-living details, like a bike rack to encourage energy efficient options for transportation, are featured throughout.

Even with all the new energy-efficient technologies, a traditional building element proved to be the most significant feature of the Eco-Plex renovation: insulation. Gary Gaulin, Associate Director of Residential Facilities, said that adding 38-R insulation in the attic space provided "the biggest bang for the buck. If I could do only one thing to the other 49 duplexes on campus, I would insulate the attics."

If you would like to learn more about the Eco-Plex, please contact Gary Gaulin at camden@clemson.edu.



Details like double hung windows and solar attic fans (pictured below) make the Eco-Plex an example of energy efficiency and sustainable living.



ENERGY STAR Program Unveils New Promotional Mark



In adding the tagline, "Learn more at energystar.gov," to its logo, the ENERGY STAR program has enhanced consumer trust in the value of the label as an easily-recognized source of information about energy efficiency provided by the government. ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

As an ENERGY STAR partner, the SC Energy Office encourages you to participate in the ENERGY STAR "Change a Light, Change the World" campaign. Simply pledge to save energy and help reduce the risks of global climate change by replacing at least one light in your home or office with an ENERGY STAR qualified one. Where can you do this? At www.energystar.gov, of course!



Reader Reminders!

Sign-up for the Electronic Version of the Energy Connection!

Did you know that commercial and residential paper waste accounts for over 40 percent of waste currently being landfilled. What are you waiting for?!?!?

If you are not already receiving this copy via email, please get to the nearest computer and send your name and email address to Whitney Wurzel at wwurzel@energy.sc.gov.

And please remember to recycle this copy of the Energy Connection!

We Want to Hear from You!

At the beginning of the year, the SC Energy Office launched a newly designed website. Let us know not what you think of the new site, and tell us how we can better serve you.

Please visit us at www.energy.sc.gov!

Conserve energy &
save money at
www.energy.sc.gov

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